

In the Matter of)
)
A National Broadband Plan for Our Future) GN Docket No. 09-51
)

June 8, 2009

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Before the
Federal Communications Commission
Washington, DC 20554

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To: The Commission

I. INTRODUCTION AND SUMMARY

As the Commission prepares its report to Congress on a National Broadband Plan,¹ CTIA urges it to recognize the important part that wireless broadband plays in the national broadband marketplace. Mobile wireless broadband is not a third pipe to the home, but rather broadband to the person, wherever and whenever they want it. As Robert Atkinson recently stated on a panel on Capitol Hill discussing broadband in America, in setting broadband policy the “government should not abdicate, it should not regulate, but rather it should facilitate.”

CTIA agrees with this approach to the development of broadband policy in the United States. As the Commission develops its National Broadband Plan, it must be forward thinking. It should not be lulled into old debates nor limited to old ways of defining consumer demand and consumer adoption of broadband. It should not attempt to take issues and solutions that were designed for an already-outdated broadband world and apply it to the broadband market of today. Instead, the Commission should strive to develop a truly revolutionary (and hopefully evolutionary) plan for ensuring that

¹ In re: A National Broadband Plan for Our Future, Notice of Inquiry, GN Docket No. 09-51 (rel. Apr. 8, 2009) (“National Broadband Plan NOI”).

American consumers have access to the broadband services of their choice. The Commission has the time and the resources to complete this task properly.

As the Commission begins an earnest, complete review of the broadband marketplace in the United States, CTIA presents data in these comments that highlight the role that wireless is playing in delivering broadband to the person. These statistics, and the rest of the CTIA's comments, show that wireless is a different form of broadband than cable and wireline, that not only is being actively adopted by consumers, but that is evolving rapidly and delivering services that were unimagined just a short time ago. For example:

- Over 78% of the wireless devices in America are mobile broadband capable.
- According to FCC data, more than 90% of Americans live in areas with more than four 3G wireless broadband service providers.
- More consumers have adopted wireless broadband between 2005 and 2007 (the last year the FCC has released data for high-speed subscribers) than DSL and cable, combined.
- Over 60,000 applications have been developed for the mobile wireless broadband environment, with many more on the way. In less than one year, seven companies have opened, or have announced that they will open, applications stores.

Further, the evolution not only is occurring on the technology side. Consumers also are enjoying a myriad of service offerings. In order to accommodate the varying needs, wants and budgets of American consumers, the wireless industry offers wireless broadband service in a variety of ways.

- Wireless consumers have service plans for every need. From heavy Internet users who benefit from bucket plans and bundling, to low-volume or low-income users who pay only for the services they use, and everyone in between. All benefit from the flexibility of wireless broadband.

- Different wireless devices – like smartphones, aircards, and netbooks – are providing consumers with the increasingly dynamic Internet experiences that they demand from their wireless providers.

With these, and more, statistics in mind, the Commission should reconsider not only how it will facilitate broadband deployment and adoption, but also how it measures broadband adoption. While wireless mobile broadband is different than other services in many respects, a forward-thinking Broadband Plan must factor wireless into any discussion on adoption. Consumers that choose to use mobile broadband, whether through a monthly plan, a metered plan, or on a use-by-use basis, still are getting access to the benefits of broadband. To devalue the solution that they choose is to review broadband through the old wired broadband lens.

Going forward, there is much that the Commission can do as part of the development and implementation of the National Broadband Plan. One of the many questions the Commission asks in the NOI is, “what is the best way to attract risk capital to broadband infrastructure projects?” The simple answer is to provide certainty. Certainty in the regulatory environment, certainty in terms of access to additional spectrum for commercial licensed services, and certainty in terms of the ability of carriers to site their towers and antennas. Specifically, the Commission should:

- Identify additional spectrum for reallocation to licensed commercial mobile use to accommodate wireless broadband demand that is rapidly outstripping the capacity available on wireless broadband networks.
- Recognize the unique nature of wireless services and allow wireless broadband providers to manage their networks and to prioritize traffic to ensure a quality wireless experience for all consumers. The Commission should neither extend application of its Broadband Policy Statement to wireless networks, nor should it adopt a non-discrimination principle that will limit carriers ability to ensure the innovation and quality consumers have come to expect from wireless service. CTIA is not suggesting that the Commission abdicate its regulatory role, but rather that as part of its plan, it acts in a forward-looking manner that recognizes

that wireless broadband is different than the other services upon which the Broadband Policy Statement was developed and applied.

- Lower barriers to infrastructure investment and deployment by adopting CTIA's Tower Siting "shot clock" proposal and by addressing broadband and wireless industry concerns over pole attachment rates.
- Not allow the legacy inefficiencies and opportunities for arbitrage of a system developed for a bygone technological era to taint our broadband future – comprehensive reform should repurpose the ailing universal service and intercarrier compensation system to reflect broadband realities.

The Commission and Congress should be proud of the competitive, dynamic and innovative environment they have created for wireless broadband that has fostered such accelerated deployment and adoption. By creating a stable environment and adopting the proposals found throughout these comments, the Commission can continue to drive a dynamic competitive broadband market for American consumers.

II. WIRELESS BROADBAND IS AN IMPORTANT PART OF THE U.S. BROADBAND INFRASTRUCTURE

The unique aspects that wireless broadband brings to the consumer broadband market in the United States should not be understated. Wireless broadband can be the solution to many of the issues raised in this NOI. Over the last decade, the technologies and marketplace of America's communications sector have evolved in ways that demonstrate the high value American consumers now place on mobile voice and broadband services. In 1997, there were approximately 55 million wireless telephone subscribers.² By year-end 2008, that number had risen almost five-fold, to more than 270

² *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, Third Annual CMRS Competition Report*, 13 FCC Rcd 19746 app. B, at B-2 (1998).

million.³ As quickly as the number of wireless voice subscribers grew, the number of wireless broadband subscribers is growing even more dramatically. More and more Americans are proving that the concept of a “third pipe to the home” has been surpassed by the marketplace. Wireless is not a third broadband pipe into the *home*, but rather broadband to the *person*, wherever they are, whenever they want access to information. Going forward, all discussion involving broadband, whether at the Commission or in Congress, should be based on the notion of facilitating broadband to the person. Mobile broadband additions are driving the growth of high-speed lines overall, and mobile broadband utilization rates are accelerating at breakneck speed. As wireless networks continue to evolve, this trend will only continue. The Commission’s data shows that, since 2005, mobile wireless providers have been the fastest-growing providers of both high-speed lines (over 200 kbps in at least one direction) and advanced service lines (over 200 kbps in both directions), with subscriber counts for high-speed lines more than *doubling* and advanced service lines more than *tripling* from just one year earlier.⁴ The report further demonstrates that wireless broadband additions from December 2006 to December 2007 outpaced, by nearly three to one, the additions for cable companies and wireline telephone companies combined.⁵ As of December 2007, mobile wireless

³ See *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, WT Docket No. 07-71, *Twelfth Annual CMRS Competition Report*, WT Docket No. 07-71, 23 FCC Rcd 2241, 2246 ¶ 2, FCC 08-28 (rel. Feb. 4, 2008) (“*Twelfth Report*”) at 6. By year-end 2008, CTIA’s semi-annual survey had found wireless subscribership had risen to 270,333,881.

⁴ HIGH-SPEED SERVICES FOR INTERNET ACCESS: STATUS AS OF DECEMBER 31, 2007, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-287962A1.pdf, at tbls.1-2.

⁵ *Id.*

providers served more than 15 million customers with advanced service lines – nearly 20 percent of all advanced services.⁶

Moreover, mobile broadband usage is skyrocketing. As Nielsen Mobile recently reported, “[i]n the US, Mobile Internet has become a mass medium.”⁷ More striking than access patterns is usage. Data from the Pew Internet & American Life Project reveal that in December 2007, 58 percent of adults have used mobile devices for non-voice activities, and 41 percent of adults have logged onto the Internet wirelessly.⁸ Additionally, mobile wireless broadband is proving to be more rapidly adopted and used in communities that have traditionally trailed in broadband adoption, such as low-income and minority consumers.⁹ For use of non-voice data applications on handhelds, members of minority communities are more likely than others to have adopted daily use of wireless broadband. Hispanics and African Americans lead the way relative to white Americans. Half of African Americans and 56% of English-speaking Latinos with cell phones, on a typical day, do at least one of 10 non-voice data applications such as taking pictures, accessing the Internet for news, playing music, or texting. By contrast, 38% of white Americans do these kinds of activities on a wireless handheld device on the average day. Even lower-income Americans with cell phones (61%) are active in using non-voice data

⁶ *Id.* at tbl. 2.

⁷ Nielsen Mobile, “Critical Mass: The Worldwide State of the Mobile Web,” at 3 (July 2008).

⁸ John Horrigan, Associate Director, Pew Internet & American Life Project, Data Memo, *Mobile Access to Data and Information* 1 (March 2008), available at http://www.pewinternet.org/pdfs/PIP_Mobile.Data.Access.pdf (“Pew Study”) at 1.

⁹ *See infra*, n. 87.

applications on cell phones; 44% of cell users in households with incomes below \$30,000 annually do one such non-voice data activity on a typical day.¹⁰

There is no doubt that these wireless growth trends will continue to transform America's communications networks as innovation and investment in mobile wireless broadband devices, services, and infrastructure continues. This statement is easily supported by simply reviewing the evolution of wireless service. In the last 18 months, some of the most advanced handsets have been launched in the U.S., including Apple's iPhone 3G,¹¹ LG's Voyager,¹² Samsung's Instinct,¹³ Google's G1,¹⁴ four Research In Motion Blackberry devices (Blackberry Storm, Blackberry Bold, Blackberry Pearl Flip and Blackberry Curve 8900),¹⁵ and the Palm Pre.¹⁶ Many of these devices, and the operating systems they run, have online stores dedicated to providing users access to applications for their wireless devices. The application stores provide consumers with access to more than 60,000 applications, and Americans have embraced this new facet of mobile wireless broadband service. In the short time since the iTunes App Store's launch – just nine months – more than one billion applications have been downloaded by

¹⁰ See John Horrigan, Seeding The Cloud: What Mobile Access Means for Usage Patterns and Online Content, Pew Internet & American Life Project, *available at* http://www.pewinternet.org/~media/Files/Reports/2008/PIP_Users.and.Cloud.pdf.pdf.

¹¹ Press Release, *at*

<http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=25146>

¹² Verizon Press Release, *at* <http://news.vzw.com/news/2007/11/pr2007-11-19.html>

¹³ Sprint Press Release, *at*

http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irolnewsArticle_newsroom&ID=1124417.

¹⁴ Martyn Williams and James Niccolai, *ComputerWorld*, *at* http://www.computerworld.com/action/article.do?command=viewArticleBasic&taxonomyName=mobile_and_wireless&articleId=9117740&taxonomyId=15&intsrc=kc_top

¹⁵ See <http://na.blackberry.com/eng/devices/>.

¹⁶ See <http://www.palm.com>.

consumers.¹⁷ The following chart shows the application stores that are available to U.S. consumers:

<u>Application Store</u>	<u>Date Launched</u>	<u>Number of Apps Available</u>
iTunes App Store	July 2008	> 35,000 ¹⁸
Android Market	October 2008	> 1,000 ¹⁹
Palm Software Store	January 2009	> 5,000 ²⁰
BlackBerry App World	April 2009	Launched with appx. 1,000 ²¹
Nokia Ovi Store	May 2009	20,000 Apps and Media Files ²²
Palm App Catalog	June 2009 ²³	
Windows Mobile Marketplace ²⁴		

This evolution supports the notion that data uses will explode. In fact, one study recently estimated that data traffic will grow at a rate about one hundred times greater than voice traffic over the next ten years.²⁵ In light of this significant and pervasive evidence of the value that consumers place on mobile broadband where it is available, *all* Americans should enjoy access to the benefits of mobile broadband communications.

III. THE NATIONAL BROADBAND PLAN SHOULD NOT SKEW THE BROADBAND MARKETPLACE

Congress and the Commission should be proud of the environment they have created. The Commission's National Broadband Plan should promote bringing

¹⁷ See <http://www.apple.com/itunes/billion-app-countdown/>.

¹⁸ See <http://www.apple.com/iphone>

¹⁹ See "Paid Apps Enter Google's Android Market", at <http://mashable.com/2009/02/13/google-android-paid-apps/>.

²⁰ See http://software.palm.com/us/html/top_products_treo.jsp?device=10035300025 and <http://appstore.pocketgear.com/palm/>.

²¹ See "RIM Launches BlackBerry App World", available at <http://na.blackberry.com/eng/newsroom/news/press/release.jsp?id=2223>.

²² See *supra* n. 19.

²³ <http://blog.palm.com/palm/2009/06/new-apps-for-new-palm-pre.html>

²⁴ Trade press reports that Microsoft is planning a marketplace for Windows Mobile devices. See <http://www.fiercedevolver.com/story/microsoft-launch-winmo-app-store-next-month/2009-01-19>; see also <http://www.downloadsquad.com/tag/windows-marketplace-for-mobile>.

²⁵ Peter Rysavy, "Mobile Broadband Spectrum Demand," at 11 (Dec. 2008).

broadband to the less than 10% of the population that remains without access to wireless broadband services, however, it should not negatively impact wireless providers' ability to continue to innovate and serve its existing consumers.

Further, the environment has allowed the U.S. wireless industry to remain nimble enough to serve America's technologically savvy consumers. Wireless carriers just began making 3G mobile wireless broadband services available in the last few years. Even so, as CTIA has detailed for the Commission before, the United States leads the world in mobile broadband use.²⁶ Because of this high level of demand, wireless broadband service is available from a number of competing wireless providers, some national in scale, others on a local or regional level. Research accounting for the then-identified fifteen 3G mobile wireless broadband providers as of June 2008 found that more than 86 percent of the U.S. population lives in areas where 3G mobile wireless broadband providers are competing with each other, in addition to competing with wireline and cable Internet access providers.²⁷ This figure understates the true impact of wireless broadband as this analysis did not, for example, include T-Mobile, which was at the time just beginning deployment of 3G mobile wireless broadband using spectrum acquired in the Advanced Wireless Services ("AWS-1") auction. All four of the nation's largest wireless carriers now offer wireless broadband service.

Beyond the five largest carriers, a number of smaller wireless carriers, as well as new entrants to the wireless market, also offer wireless broadband coverage to their

²⁶ See Letter from Christopher Guttman-McCabe, Vice President, Regulatory Affairs, CTIA – The Wireless Association® to Marlene Dortch, Secretary, FCC, GN Docket No. 09-51 (dated May 12, 2009).

²⁷ See Comments of CTIA – The Wireless Association, WT Docket No. 07-195, Attachment A at Figure 1 (filed July 28, 2008).

consumers. Small carriers such as Alaska Communications Systems (“ACS”) and Bluegrass Cellular are offering 3G wireless broadband service in rural areas of Alaska and Kentucky, respectively. Indeed, ACS was the first wireless carrier to deploy 3G wireless broadband services utilizing EV-DO technology. Similarly, Nex-Tech Wireless, serving consumers in Kansas, has deployed 3G service to more than 80% of its coverage area.

Additionally, the recent AWS and 700 MHz auctions hold great promise for expansion of wireless broadband service. Existing carriers, like NTELOS in rural Virginia and North Carolina, purchased licenses in the AWS-1 spectrum to expand their wireless broadband service offerings to serve the mobile Internet needs of their customers. Others still, like newcomer to the wireless marketplace Stelera Wireless, purchased licenses in the AWS-1 spectrum to focus exclusively on providing wireless broadband service in underserved areas.

Wireless broadband consumers have a multitude of choices in the way they access the mobile Internet, the service plans and service bundles available, and the choices of different methods of wireless Internet access. These differences, both technological and competitive, are what give American consumers real choices.

A. Wireless Broadband Carriers Offer Unique and Diverse Access Options

As consumers have adopted mobile wireless broadband services, a number of different methods have emerged for accessing the mobile Internet. Thanks in part to carriers’ ability to use discounts to incent consumers to purchase handsets with advanced capabilities, more than 78% of the wireless devices in American consumers’ hands are capable of accessing the mobile Internet. Part of the mobile wireless broadband

experience has been the increased functionality that smartphones and other advanced wireless devices have brought to consumers. Handsets are becoming tools of productivity and gateways to information in ways that are evolving every day. The smartphone market expanded in a major way in 2008, enabling consumers to get access to mobile technology that had previously only seen major penetration in the business marketplace. According to NPD Group, 23 percent of the wireless handsets sold in the U.S. in the fourth quarter of 2008 were smartphones.²⁸ Importantly, the innovation in smartphones is being felt in the U.S. first as a result of our robust marketplace. As discussed above, in the last 18 months, some of the most advanced handsets have been launched in the U.S.

In addition to smartphone use, mobile wireless broadband consumers are also using their computers for mobile broadband service. Here too, consumers have choices. Consumers who wish to use a computer with the power of mobile broadband can tether their wireless device to their computer to share its Internet connection, they can purchase an access device specifically for their computer (an “aircard”), or they can purchase an increasing number of mobile broadband enabled netbooks.²⁹ Mobile broadband enabled netbooks, small portable computers with integrated CMRS technology, have the power and convenience of mobile broadband built in to the computer itself bringing consumers access to the Internet without an additional adapter from their wireless carrier.

²⁸ http://www.npd.com/press/releases/press_090303.html.

²⁹ *See*

<http://www.verizonwireless.com/b2c/hpnetbook/overview.jsp?lid=/global/phones+and+accessories/netbooks>.

B. Wireless Broadband Carriers Offer Varied Service Options

Wireless providers have long recognized that their customers have different needs and different budgets. Through innovative and varied service features and plans, wireless carriers are bringing additional competition to the broadband marketplace and offering American consumers unique new ways to stay connected to information. As described below, wireless carriers currently meet differing consumer needs through a number of plan options, including bucket pricing, metered Internet plans and pay-as-you-go broadband service. While much has been made of the potential for varied plans in the wired broadband space, wireless broadband providers have been employing these methods – to consumers’ benefit – since the inception of wireless broadband service. This differentiation of bundled service offerings and pricing is a strength of mobile wireless broadband and directly benefits consumers. For example, customers who have wireless devices and do not choose to subscribe to an “always-on” monthly broadband service package may choose to use broadband as they need it.³⁰ This “always available” option gives low-income and low-usage consumers an alternative path to broadband connectivity. Consumers need not contact their carrier to receive and install special equipment to access the Internet. They simply open their browser and enjoy broadband service free from wires.

Additionally, wireless consumers have a number of options for service plans including bundled Internet access. Consumers requiring less data can choose to subscribe

³⁰ See, e.g., “Mobile Broadband Connection Plans,” Sprint/Nextel, *available at* <http://nextelonline.nextel.com/NASApp/onlinestore/en/Action/SubmitRegionAction> (last accessed June 13, 2007); *see also* “Data Cell Phone Plans,” AT&T, *available at* <http://www.wireless.att.com/cell-phone-service/cell-phone-plans/data-cell-phone-plans.jsp> (last accessed June 13, 2007).

to metered broadband, paying for either a “bucket of bits,” similar to voice plan pricing or subscribing to “all you can eat” broadband offerings either on a month-to-month basis or under longer term contracts providing discounted rates. These options enable consumers to tailor their wireless service plans to their broadband needs.

Recent advocacy has cast aspersions on the offering of certain types of broadband plans as anti-consumer. Specifically, Free Press and others have argued that the use of such types of service plans will negatively impact innovation.³¹ Ironically, Free Press itself argued in favor of metered usage and bandwidth caps as a better solution than network management tools to address high volume users.³² Having convinced the Commission to declare certain management tools unreasonable, Free Press has now reversed its advocacy and attacked providers’ attempts to experiment with innovative pricing plans. The Commission should see through this disingenuous line of circular reasoning.

Because so many carriers are competing to meet consumers’ broadband needs, a variety of competitive models have emerged in the wireless broadband world against a backdrop of constant innovation. Advances in network technology are quickly leading to faster mobile wireless broadband speeds. Additionally, as discussed in more detail *infra*, rapid advances in the wireless device market have changed the market from one focused

³¹ See Letter from Ben Scott, Policy Director, Free Press to Reps. Waxman, Barton, Boucher and Stearns, dated Apr. 22, 2009 (*available at* http://www.freepress.net/files/FP_metering_letter.pdf) (last accessed June 8, 2009).

³² Comments of Free Press, *et al.*, WC Docket No. 07-52, at 35 (filed Feb. 13, 2008) (“Network providers should engage in *non*-discriminatory ‘feasible facility improvements’ or, if necessary, ‘technology-neutral capacity pricing’ that does not involve ‘discriminatory charges.’ (This precedent is relevant also for metered pricing, with which Time Warner is experimenting.)”) (emphasis in original).

on “cell phones” to one focused on “mobile wireless devices” and smartphones that more closely resemble handheld computers.

The end result of this constant innovation in the network and in the handsets that comprise the end of the network is the explosion of application innovation that the mobile wireless broadband industry has seen over the last year.

Like mobile wireless broadband services, generally, American consumers have embraced the world of applications and services that are being designed for their mobile platforms. For example, in Apple’s iTunes App Store alone there are more than 35,000 applications available for download. In the short time since the iTunes App Store’s launch – just nine months – more than one billion applications have been downloaded by consumers.³³ Even the Skype application, the subject of a pending proceeding before the Commission,³⁴ is available on the iTunes App Store for the iPhone³⁵ and available for download to any Windows Mobile device on the Skype website.³⁶

These incredible innovations in applications on mobile wireless devices and networks have brought consumers literally tens of thousands of applications for use whenever and wherever consumers want. However, as CTIA has described for the Commission before, in the absence of reasonable network management, wireless carriers cannot ensure the high level of quality service that consumers have come to expect from wireless and that has spurred companies to continue to innovate and driven this growth in

³³ See <http://www.apple.com/itunes/billion-app-countdown/>.

³⁴ Petition to Confirm a Consumer’s Right to Use Internet Communications Software and Attach Devices to Wireless Networks, Skype Communications S.A.R.L., RM-11361 (filed Feb. 20, 2007).

³⁵ <http://www.skype.com/go/gets skype-iphone>.

³⁶ “Skype 2.5 for Windows Mobile” *at* <http://www.skype.com/download/skype/windowsmobile/> (last accessed Apr. 7, 2009).

application development.³⁷ In fact, the efficient use of the spectrum to provide quality service is consistently ranked one of the highest factors in consumer choice of wireless provider. The technological limitations of the spectrum medium demand careful management in order to provide wireless consumers a quality, fast and reliable wireless broadband experience. The U.S. mobile wireless industry continues to evolve and adapt to serve consumer needs.

IV. THE NATIONAL BROADBAND PLAN SHOULD LOWER BARRIERS TO BROADBAND NETWORK INVESTMENT, PROMOTE INFRASTRUCTURE IMPROVEMENTS, AND FACILITATE DEMAND FOR BROADBAND SERVICES

A. Timely Deployment of Wireless Tower Facilities is Critical to Ensuring Consumers' Access to Wireless Broadband Services.

As described *supra*, it is incontrovertible that wireless service is playing a key role in bringing broadband service to American consumers. Continued growth, however, depends on the availability of sites for the construction and placement of towers and transmitters.³⁸ Before a site can be utilized as a wireless tower location, zoning approval is generally required at the state or local level – a process that can be extremely time-consuming. Ambiguities in Section 332(c)(7)(B) have allowed some zoning

³⁷ See Comments of CTIA – The Wireless Association®, WC Docket No. 07-52 (filed Feb. 13, 2008).

³⁸ See, e.g., *Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service*, GN Docket No. 96-228, *Report and Order*, 12 FCC Rcd. 10785, 10833 ¶ 90 (1997) (describing site acquisition and zoning as a “major cost component” and a “major delay factor” of wireless deployment); *Nationwide Programmatic Agreement Regarding the Section 106 National Historic Preservation Act Review Process*, WT Docket No. 03-128, *Report and Order*, 20 FCC Rcd. 1073, 1077 ¶ 6 (2004) (describing delays in Section 106 tower site approvals as a threat to wireless deployment); *Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation*, WT Docket No. 04-70, *Memorandum Opinion and Order*, 19 FCC Rcd. 21522, 21576 ¶ 137 (2004) (describing the difficulty of acquiring tower siting permits as a possible obstacle to effective competition in wireless communications).

authorities to create substantial impediments to wireless facility siting and the provision of wireless services. CTIA and numerous others have documented the widespread zoning delays across the country³⁹ – delays that threaten the Act’s goal of “... deployment *on a reasonable and timely basis* of advanced telecommunications capability to all Americans.”⁴⁰ Accordingly, CTIA urges the Commission to give effect to a comprehensive National Broadband Plan by granting CTIA’s Petition for Declaratory Ruling to clarify provisions of the Act regarding state and local review of wireless facility siting applications. Specifically, the Commission should:

- Establish timeframes within which local zoning authorities must act on tower siting and wireless facility applications (45 days for collocation; 75 days for other facilities).
- Hold that where a zoning authority does not act on an application within the benchmarks set out above, the application will be deemed granted, or, in the alternative, establish a presumption that a reviewing court should issue an injunction granting the application unless the zoning authority justifies the delay.

³⁹ See, e.g., CTIA Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B) to Ensure Timely Siting Review and to Preempt Under Section 253 State and Local Ordinances that Classify All Wireless Siting Proposals as Requiring a Variance, WT Docket No. 08-165, at 14-16 (filed July 11, 2008) (“CTIA Petition for Declaratory Ruling”); CTIA Reply Comments, WT Docket No. 08-165, at 4-8 (filed Oct. 14, 2008). Several CTIA members provided input indicating that they collectively have more than 3300 wireless siting applications pending before local jurisdictions. Of those, approximately 760 have been pending final action for more than one year. More than 180 such applications have been awaiting final action for *more than 3 years*. Even where the wireless siting application merely seeks to collocate on an existing site, delay may be substantial. Nearly 350 of the 760 applications pending for more than one year are collocation requests, with approximately 135 of these pending for more than 3 years. CTIA Petition for Declaratory Ruling at 15. Thus, despite the clear intent of Congress to ensure prompt action on wireless siting applications, the data indicates that many localities ignore this mandate.

⁴⁰ Telecommunications Act of 1996 § 706 (emphasis added), reproduced in 47 U.S.C. § 157(c) (“1996 Act”); see *Promotion of Competitive Networks in Local Telecommunications Markets*, WT Docket No. 99-217, *Notice of Proposed Rulemaking and Notice of Inquiry*, 14 FCC Rcd. 12673, 12691 ¶ 33 (1999).

- Clarify that a zoning authority may not deny an application filed by one provider based on the presence of another wireless provider in the area.
- Announce that, in the case of a Section 253 preemption challenge, it will invalidate zoning ordinances that require all applicants for wireless facilities to obtain variances, regardless of the proposed facility's location or scope.

The Commission has recognized that “we expect that wireless broadband will play a critical role in ensuring that broadband reaches rural and underserved areas, where it may be the most efficient means of delivering these services.”⁴¹ The agency also has acknowledged that “site acquisition and zoning approval for new facilities is both a major cost component and a major delay factor in deploying wireless systems.”⁴² Congress expressly recognized local zoning as one of the key impediments to the rapid deployment of wireless services to all Americans. As a result, Congress enacted specific provisions in Section 332(c)(7)(B) of the Act designed, in the Supreme Court's words, to place reasonable limits on traditional zoning authority powers to reduce “the impediments imposed by local governments upon the installation of facilities for wireless communications, such as antenna towers.”⁴³ Congress also enacted Section 253 to preempt any “State or local statute or regulation, or any other State or local legal requirement” that “prohibit[s] or [has] the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service” – including wireless

⁴¹ *Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks*, WT Docket No. 07-53, Declaratory Ruling, 22 FCC Rcd. 5901, 5908 ¶ 17 (2007).

⁴² *Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service*, GN Docket No. 96-228, *Report and Order*, 12 FCC Rcd. 10785, 10833 ¶ 90 (1997).

⁴³ *City of Rancho Palos Verdes v. Abrams*, 544 U.S. 113, 115 (2005).

service.⁴⁴ Grant of CTIA's Petition will restore the balance between federal policies regarding timely wireless broadband deployment and local authorities' exercise of their zoning powers.

The delays associated with local zoning reviews become even more critical as wireless service providers face build-out requirements that were intended to be "the most stringent ever imposed by the Commission – designed to encourage prompt deployment of services."⁴⁵ The new requirements applicable to the recently auctioned 700 MHz spectrum were designed to ensure the rapid deployment of state-of-the-art wireless broadband services throughout the country.⁴⁶ Yet the Commission's aggressive goals are put at risk by the inability of wireless service providers to obtain timely action by local authorities for site construction. For example, it often takes more than one year to obtain local approval for a wireless site.⁴⁷ Thus, in many areas, local zoning policies are frustrating the goals of the Act and delaying the provision of wireless broadband services to millions of Americans.

Given the clear intent to facilitate expeditious wireless broadband build-out and Section 332(c)(7)(B)'s limits on the zoning review process, CTIA reiterates its request

⁴⁴ 47 U.S.C. § 253(a).

⁴⁵ See *Applications for License and Authority to Operate in the 2155-2175 MHz Band*, WT Docket No. 07-16, *Order*, 22 FCC Rcd. 16563, 16572-73 ¶ 15 n.52 (2007).

⁴⁶ See *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, WT Docket No. 06-150, *Second Report and Order*, 22 FCC Rcd. 15289, 15293, 15348-51 ¶¶ 6, 153-60 (2007). For example, 700 MHz licensees with CMA and EA licenses are required to provide service sufficient to cover 35 percent of the geographic area of their licenses within four years, and 70 percent of this area within ten years (the license term); those with REAG licenses must provide service sufficient to cover 40 percent of the population of their license areas within four years and 75 percent of the population within ten years, on an EA by EA basis. See *id.*

⁴⁷ See, e.g., CTIA Petition for Declaratory Ruling at 14-16; CTIA Reply Comments at 4-8.

for a declaratory ruling (i) clarifying the time period in which a state or local zoning authority must take action on a wireless facility siting request under Section 332(c)(7)(B), (ii) declaring that a zoning authority's failure to act within the relevant time frame will give rise to a "deemed grant" of the application, or alternatively will warrant a court-ordered injunction granting the application unless the zoning authority can justify the delay, (iii) clarifying that Section 332(c)(7)(B)(i) bars zoning decisions that have the effect of prohibiting a particular provider from offering service in a given area; and (iv) declaring that zoning ordinances requiring variances for all wireless siting requests – without regard to a facility's location or scope – are unlawful and will be struck down if challenged in the context of a Section 253 preemption action.

B. Access to Existing Electric Utility Poles For Wireless Attachments Benefits Wireless Broadband Deployment in Unique Coverage Situations or Where New Tower Construction is Infeasible

While timely build-out of wireless tower facilities remains critical to wireless broadband deployment, there may be unique circumstances affecting coverage, spectrum-related propagation challenges, or situations where new tower construction is simply infeasible. In these instances, placement of wireless communications equipment on existing electric utility distribution poles – a right affirmed by Congress, the Commission and the courts – is playing an increasingly important role in achieving reliable "last mile" wireless broadband service. Yet despite existing federal and state regulations that provide for rights of attachment and non-discrimination, wireless carriers around the country have had difficulty negotiating and obtaining fair pole attachment agreements, both for mid-pole and pole-top wireless attachments. Accordingly, CTIA

urges the FCC to clarify and affirm its rules regarding nondiscriminatory and reasonable rates for wireless pole and conduit access. Specifically, the Commission should:

- Affirm its tentative conclusion to set a unified rate for all providers capable of providing broadband service, which rate should be as low as possible for the electric utilities to receive just compensation.
- Establish a presumption for space used by a wireless attachment and specify that “Usable Space” includes the pole top.
- Address electric utilities’ unsubstantiated objections to wireless attachments based on RF emissions and safety issues.

Electric utility poles may be the only practicable form of infrastructure that may be located in residential areas. Local governments and residents benefit from the efficient use of existing infrastructure, such as electric utility distribution poles and transmission towers. The Commission has previously recognized these important benefits that ultimately inure to consumers:

[p]roviding wireless carriers with access to existing utility poles facilitates the deployment of cell sites to improve coverage and reliability of their wireless networks in a cost-effective and environmentally friendly manner. Such deployment[s] ...promote public safety, *enable wireless carriers to better provide telecommunications and broadband services*, and increase competition and consumer welfare in these markets.⁴⁸

This is particularly important in residential zones, parks and similar areas where consumers expect wireless coverage but often oppose the aesthetic impact of new wireless towers or other large infrastructure.

⁴⁸ *Wireless Telecommunications Bureau Reminds Utility Pole Owners of their Obligations to Provide Wireless Telecommunications Providers with Access to Utility Poles at Reasonable Rates*, Public Notice, 19 FCC Rcd. 24930 (2004) (“*Wireless Attachments Notice*”) (emphasis added).

i. The FCC Should Clarify and Reaffirm its Rules Regarding Nondiscriminatory and Reasonable Rates, Terms and Conditions for Wireless Access to Electric Utility Poles

Wireless service providers are clearly protected under the umbrella of federal regulation.⁴⁹ Yet instances exist where electric utility pole owners choose not to recognize wireless attachers' rights of just, reasonable and nondiscriminatory access to poles. Thus, it is necessary for the Commission to take the following actions to facilitate wireless broadband deployment through the use of electric utility poles.

First, the Commission should affirm its tentative conclusion to establish a unified rate for all providers capable of providing broadband service. Consistent with the Commission's pro-competitive policy of encouraging broadband deployment, broadband

⁴⁹ See, e.g., CTIA Comments *In re Implementation of Section 224 of the Act; Amendment of the Commission's Rules and Policies Governing Pole Attachments*, Notice of Proposed Rulemaking, WC Docket No. 07-245, RM-11293, RM-11303 at 5-9 (filed Mar. 7, 2008). CTIA noted The 1996 Telecommunications Act requires utilities, including electric utilities and Local Exchange Carriers ("LECs"), to "provide...any telecommunications carrier with nondiscriminatory access to any pole, conduit or right-of-way owned or controlled by it," 47 U.S.C. § 224(f)(1), and to do so at "just and reasonable rates, terms and conditions." 47 U.S.C. § 224(b)(1). The Commission affirmatively recognized that federal statutes safeguard wireless pole attachments rights, *See Implementation of Section 703(e) of the Telecommunications Act of 1996; Amendment of the Commission's Rules and Policies Governing Pole Attachments*, Report and Order, 13 FCC Rcd. 6777 at ¶¶ 39-41 (1998), which decision was upheld by the U.S. Supreme Court in *National Cable & Telecommunications Assoc. v. Gulf Power Co.*, 534 U.S. 327 (2002) (holding that "attachments at issue in this suit...ones which provide wireless telecommunications—fall within the heartland of the [Pole Attachments] Act,"). CTIA's Comments observed that the courts and the FCC have reaffirmed that the principles of nondiscriminatory and just and reasonable access to utility poles fully apply to pole attachments of wireless providers. *See id.*; see also *Southern Company Services, Inc. v. FCC*, 313 F.3d 574 (D.C. Cir. 2002).; *Omnipoint Corp. v. PECO Energy Co.*, Memorandum Opinion & Order, PA 97-002, DA 03-857 at ¶ 7 (2003); *Wireless Attachments Notice*. The only recognized limits to access for antenna placement by wireless telecommunications carriers are those contained in the statute: "where there is insufficient capacity, or for reasons of safety, reliability, and generally applicable engineering purposes." 47 U.S.C. § 224(f)(2); *Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, Order on Reconsideration, 14 FCC Rcd. 18049, 19074 (¶ 72) (1999).

providers should be subject to *as low of a rate as possible* for electric utility pole owners to receive just compensation. Because the Commission has repeatedly affirmed that the Cable Rate provides just and reasonable compensation,⁵⁰ the unified rate should be set at the lower default Cable Rate.

Second, the Commission should establish a presumption for space used on a pole by a wireless attachment and specify that “Usable Space” includes the pole top. Disputes often occur over whether vertical runs (*i.e.*, cabling, wiring, conduits, etc.) associated with the wireless attachments should be considered when factoring the rate charged for space used. The Commission could limit disagreement and delay by looking to the Utah Administrative Code regarding its definition of usable space.⁵¹ Specifically, CTIA urges the Commission to clarify that the space occupied by the wireless providers’ attachments “may not include any of the length of a vertically placed cable, wire, conduit, antenna, or other facility unless the vertically placed cable, wire, conduit, antenna, or other facility prevents another attaching entity from placing a pole attachment in the usable space of the pole.”⁵²

In addition, CTIA urges the FCC to amend its rules to specify that a telecommunications carrier’s access to poles includes access to the pole tops. Wireless providers’ difficulties in obtaining pole-top access due to pole owners’ arbitrary and inconsistent requirements is well documented in the Commission’s pending pole

⁵⁰ See *Alabama Power Co. v. FCC*, 311 F.3d 1357, 1370-71 (11th Cir. 2002), *Georgia Power Company v. FCC*, 346 F.3d 1033 (11th Cir. 2003).

⁵¹ See generally Utah Admin Code, Pole Attachments, R746-345-5 (“Utah Code”).

⁵² Utah Code, R746-345-5 (A)(3)(e)(i).

attachments NPRM proceeding.⁵³ The Commission should take this opportunity to declare that electric utility pole owners may not categorically deny access to all pole tops without justification. For wireless carriers, antenna placement at the highest point possible on the poles is often essential. The coverage capability of a wireless antenna directly depends upon its height above the surrounding terrain. Offering better coverage, antenna placement at the pole top reduces the amount of antennas needed.

Third, the Commission should address electric utilities' unsubstantiated objections to wireless attachments based on radiofrequency ("RF") emissions and safety issues. As a pretext to deny or severely limit wireless carriers' access to poles and pole tops, electric utility pole owners frequently make unsupported claims that certain wireless structures on distribution poles are unsafe or unreliable. These concerns are entirely unwarranted, as wireless carriers comply with comprehensive statutes, regulations, and codes enacted to address these issues. To ensure safe installations, wireless providers strictly adhere to the National Electrical Safety Code ("NESC"), FCC regulations, Occupational Safety and Health Administration ("OSHA") rules, Environmental Protection Agency ("EPA") regulations and state building code standards, among others.⁵⁴ The FCC and OSHA wholly regulate issues involving RF emissions.⁵⁵ The

⁵³ See *In re Implementation of Section 224 of the Act; Amendment of the Commission's Rules and Policies Governing Pole Attachments*, Notice of Proposed Rulemaking, WC Docket No. 07-245, RM-11293, RM-11303, 22 FCC Rcd. 20195 (2007); See, e.g., Comments of Crown Castle Solutions Corp. at 4-5; Comments of the DAS Forum at 11-14; Comments of NextG Networks, Inc. at i, 8, 13-15.

⁵⁴ See, e.g., NESC Rules: 222 – Joint use structures, 224A – Communications circuits located within the supply space and supply circuits located within the communications space, 230A3-4 – Measurement of clearance and spacing; Rounding of calculation results), 235I – Clearance specifications between antennas attached in the supply space, 236 – Climbing space, 237 – Working space, 238 – Vertical clearance between certain communications and supply facilities located on the same structure.

Commission should make explicit that electric utility pole owners may not require arbitrary and unnecessary technical standards on top of those already in place.

The Commission, in devising a comprehensive broadband plan, has a unique opportunity to clarify and reaffirm important rates, terms and condition governing access to existing electric utility poles that will reap huge dividends for current and future wireless broadband deployment. CTIA respectfully urges the Commission to take these important steps.

C. The FCC's National Broadband Plan Should Provide for Additional Spectrum Resources for Wireless Broadband Providers

Wireless broadband access stands at a pivotal moment in its evolution, with fundamental innovation occurring at the network, device, and application levels. The technology that enables mobile wireless Internet access at speeds as fast as (or even faster than) current fixed-line platforms like DSL or cable modem are being deployed by wireless carriers.⁵⁶ At the same time, recently licensed blocks of spectrum are expected to be used to provide mobile wireless broadband access.⁵⁷












U.S commercial wireless carriers are the most efficient users of spectrum worldwide. With just under 410 MHz of spectrum – a number that includes AWS-1, 700 MHz and BRS allocations that may not yet be available for use – U.S. wireless carriers

⁵⁵ See Office of Engineering and Technology, *Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields* (1997). See also 47 C.F.R. § 1.1310; <http://www.fcc.gov/oet/rfsafety>. OSHA rules also address RF emissions, see 29 C.F.R. §§1910.97, 1910.268.

⁵⁶ See, e.g., Letter from Paul Garnett, CTIA, to Marlene Dortch, FCC, WC Docket Nos. 05-337, 05-271 and 04-36; CC Docket Nos. 96-45 and 02-33 (filed Feb. 20, 2007) attachment (“Regulatory Classification of Wireless Broadband Internet Access”) at 3 (chart showing wireless broadband speeds).

⁵⁷ See, e.g., *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, et al.*, WT Docket Nos. 06-150, et al., Second Report and Order, 22 FCC Rcd 15289 (2007) (“700 MHz Order”).

provide service to more than 270 million subscribers. With more than 651,000 subscribers served per MHz of spectrum allocated, U.S. carrier efficiency far surpasses that of other carriers in the OECD's top ten countries by GDP.

										
	 USA	 Japan	 Germany	 U.K.	 France	 Italy	 Canada	 Spain	 S. Korea	 Mexico
Subscribers**	270.3m	109.3m	107.2m	76.4m	57.4m	90.5m	21.6m	52.5m	45.6m	77.9m
Average Consumers' Minutes of Use per Month**	829	139	102	192	245	131	444	157	320	162
Average Revenue per Minute – A Measure of the Effective Price per Voice Minute**	\$0.05	\$0.26	\$0.16	\$0.12	\$0.14	\$0.16	\$0.09	\$0.20	\$0.08	\$0.06
Top Two Carriers Percentage of the Total Market**	55.2%	77.6%	70.2%	50.6%	78.1%	71.7%	67.4%	76.5%	82.0%	92.0%
Efficient Use of Spectrum -- Subscribers Served per MHz of Spectrum Allocated	651,100	312,968	347,540	214,002	148,958	290,622	103,414	144,692	194,420	630,833
Spectrum Assigned for Commercial Wireless Use	409.5 MHz*	347 MHz	305 MHz	352.8 MHz	374.6 MHz	311.4 MHz	205 MHz	358 MHz	233 MHz	120 MHz

*Figure includes AWS-1, 700 MHz spectrum not yet in use and 55.5 MHz of spectrum at 2.5 GHz.

** Glen Campbell, et al., "Global Wireless Matrix 4Q08," Merrill Lynch, April 13, 2009, at Table 1.

In fact, U.S. carriers serve more than three times more consumers per MHz than carriers in the United Kingdom, double the consumers per MHz of Japanese carriers, more than double the European average and more than six times the number of consumers per MHz of our Canadian neighbors.

However, demand for mobile wireless broadband is projected to continue to increase. One study recently estimated that data traffic will grow at a rate about one hundred times greater than voice traffic over the next ten years.⁵⁸ As described above, as wireless networks and handsets evolve to support additional broadband applications

⁵⁸ Peter Rysavy, "Mobile Broadband Spectrum Demand," at 11 (Dec. 2008).

network providers have invested billions of dollars in network improvements. However, network and handset efficiency improvements alone cannot meet the rising demand for mobile wireless broadband.

While U.S. wireless carriers may lead the world in spectral efficiency, additional spectrum will be needed to accommodate rising demand. CTIA's research on spectrum efficiency also showed another startling statistic. Despite overwhelming use and increasing demand, the U.S. is lagging behind other OECD nations in one particular wireless broadband category – additional spectrum identified for licensed commercial use. For example, the United Kingdom has more than 350 MHz currently licensed to CMRS providers, serving Britain's 76 million subscribers. In addition to the currently licensed spectrum, Ofcom, the UK regulator has identified and is in the process of reallocating *an additional 355 MHz of spectrum* for CMRS – the result will be nearly 710 MHz, more than double the spectrum currently available to Britain's wireless broadband providers and over 300 MHz more than what is available to U.S. wireless providers. Similarly, in Germany there are *340 MHz of spectrum* identified to be reallocated for CMRS, bringing the spectrum available to German wireless broadband providers to 645 MHz, over 200 MHz more than what is available in the U.S.

In sharp contrast, the United States, the world leader in mobile Internet use has a *mere 40 MHz of spectrum* “in the pipeline” for CMRS providers – the AWS-2 and AWS-3 allocations – which have been long pending and plagued by technical challenges. The Commission's National Broadband Plan must include additional, identified allocations of spectrum for CMRS, along with an identified path for reallocation and clearing of incumbent users.

V. THE NATIONAL BROADBAND PLAN MUST MAINTAIN TECHNOLOGICAL NEUTRALITY WHILE RECOGNIZING THE BENEFITS AND UNIQUE CHARACTERISTICS OF MOBILE WIRELESS BROADBAND

CTIA strongly believes that technological neutrality is a necessary part of any broadband plan. However, technological neutrality doesn't necessarily mean blind application of identical rules without consideration of legitimate technological differences. No two broadband services are perfect substitutes for one another. To that end, a National Broadband Plan shouldn't seek to impose one set of uniform, one-size-fits-all rules on broadband networks designed to meet varied needs. Recognizing the differences between broadband technologies – including the competitive differences that give consumers choice in the broadband market – will best serve consumers and a national plan.

A. The Commission's Broadband Policy Statement Doesn't Currently Apply to Wireless and Shouldn't be Extended to Wireless

Wireless networks are inherently different than the networks for which the Broadband Policy Statement was developed. This was acknowledged by the Commission when the Broadband Policy Statement was first developed, and reaffirmed later as the Broadband Policy Statement was applied, whether in the merger context⁵⁹ or otherwise.⁶⁰ The underlying network infrastructure, including spectrum, as well as the integration of the customer equipment make wireless significantly different than other broadband networks. Specifically, as detailed below, spectrum-based services like mobile

⁵⁹ See e.g., In re: Applications of Cellco Partnership d/b/a Verizon Wireless and Atlantis Holdings LLC, Memorandum Opinion and Order and Declaratory Ruling, WT Docket No. 08-95, at ¶¶ 189-91 (Nov. 4, 2008); see also In re: AT&T, Inc. and BellSouth Corporation Application for Transfer of Control, Memorandum Opinion and Order, WC Docket No. 06-74, at p. 154 (Mar. 26, 2007).

⁶⁰ National Broadband Plan NOI at n. 71.

broadband require careful management of scarce network resources and close cooperation between the network core and the devices that comprise its edges, in order to ensure a robust, high-quality consumer experience. The Broadband Policy Statement was written to address specific concerns on commercial wireline networks. Because it would upend networks managed such as wireless, public safety and others, the Broadband Policy Statement clearly does not and should not be applied to wireless broadband networks.

i. Carriers Manage Networks to the Benefit of Consumers

In the absence of unlimited amounts of spectrum, wireless broadband providers will need to continue to manage their networks. It is not impact on an inanimate network that carriers manage, but rather the impact on people. This impact on service is further complicated on wireless networks by the fact that spectrum is shared between users and between services, which means that, not only are data users sharing the same amount of network capacity,⁶¹ data users must also share the limited capacity with voice users, particularly as carriers move to IP-based platforms. A Washington Post article last year noted that as few as five percent of users can use more than 50% of the network capacity.⁶² This is a statistic that, according to the Yankee Group, is not unique to one broadband medium.⁶³ In the wireless environment, one carrier has determined that less

⁶¹ CTIA notes that cable modem data users also share capacity in a similar manner. However, because cable systems have far more capacity than modern wireless systems, the trade-off between capacity and latency and competition for network resources is less acute. As discussed below, simply adding wireless network capacity would not alone obviate the need for network management. Moreover, wireless providers do not have the option to simply install additional capacity, but must work within the constraints of the limited spectrum available to them.

⁶² Steven Levy, “Pay Per Gig”, The Washington Post, D1 (Jan. 30, 2008).

⁶³ David Vorhaus, *Confronting the Albatross of P2P*, Yankee Group (May 31, 2007).

that four-percent of its customers use more than 50% of their network capacity. Without the ability to manage the network environment, use of data intensive applications will harm consumers. Wireless networks rely on careful management of scarce capacity to ensure that consumers have access to high-quality voice and data service. Put simply, wireless broadband networks are different.

First, because of the shared air interface between the consumer device and the base station, wireless broadband customers share the capacity of a cell site with wireless voice users. This is markedly different from the traditional telephone network or cable television. In wireline networks, increased data traffic doesn't have a detrimental effect on the other services offered by wireline providers – voice or television. The same is true for cable. An increase in cable modem activity doesn't affect the television signal. While these network operators clearly need to have the ability to manage their networks, the impact of their other service offerings by high data use is not the same as it is in wireless. On wireless networks in the absence of network management, bandwidth intensive applications and other spectrum uses would have the potential to prevent or degrade the use of the voice service that consumers rely upon – and in the case of E-911, rely upon in emergency situations.

Because voice and data services share the same connection to the wireless user, wireless carriers must carefully balance consumers' desire for higher capacity data and video service and high-quality voice calling that is free from latency (*i.e.* delays in audio). In order to minimize latency and maximize capacity available to users, the wireless network must determine which packets are less sensitive to immediate delivery.

Voice data, which is highly susceptible to the latency of the connection, must be delivered with a higher priority than non-time sensitive data packets that can be better scheduled for more efficient delivery.

Second, the capacity of a cell site is shared between all users in that cell. Unlike the example where each user has a dedicated pipe to their home, the wireless user must share the available bandwidth with other users – both voice and data users – in their vicinity.⁶⁴ Because of this, a number of factors can contribute to a degraded user experience in the absence of wireless network management. Without the ability to manage network resources, one user's network demands can consume the entire capacity of the base station to which it is connected. This will, at a minimum, slow down the other users' applications, and in the extreme will prevent other users from running their applications or making voice calls.

In order to maximize the utility of the available spectrum to all users, wireless broadband providers utilize network management. For example, modern wireless data networks such as EV-DO and HSDPA use a technique called multi-user diversity to increase capacity of data networks beyond the capacity possible for voice-only networks. By monitoring the quality of the connection between the wireless device and the base station, multi-user diversity allows all of the users of the system to have better capacity. The wireless system monitors the quality of the connection between the base station and the mobile handset and transmits data during intervals when the connection is performing well. If there are several users being served by the same base station, then chances are

⁶⁴ See Opposition of CTIA, RM-11361 (filed April 30, 2007), Attachment C (Jackson Paper) at 3.1.1; see also Marius Schwartz and Federico Mini, "Hanging up on *Carterfone*: The Economic Case Against Access Regulation in Mobile Wireless," p. 19, May 2, 2007.

that at any particular time, one of them has a high-quality connection and transmissions to that user will exploit that high-quality connection for more efficient throughput of data. If the system carefully schedules transmissions to each user, then the system as a whole will perform better than the average connection to each user would allow without scheduling.

ii. The Wireless Handset is an Integral Part of the Wireless Network.

Because wireless is a shared environment, not only the quality of the underlying network, but also the quality of the devices that comprise the network edge are critically important to network quality. Carriers continually change elements of their networks, including the handsets to provide consumer with better coverage, increased functionality and new features. For example, air interface standards alone have seen at least 12 iterations between 1988 and today,⁶⁵ with fourth generation end-to-end IP networks currently on the horizon.⁶⁶ In response to consumer demand, U.S. wireless carriers have offered consumers greater flexibility to bring wireless devices to the network, rather than purchasing the devices directly from their chosen carrier.⁶⁷ However, the critical role of the wireless handset as a part of the wireless network, remains unchanged. To that end, the Commission's National Broadband Plan should recognize that wireless carriers' control over certification of devices for their networks remains necessary to ensure quality of service.

This ability to continue improving and adding intelligence to the network itself, in addition to the handset, has allowed the wireless industry to continue to push the

⁶⁵ See Jackson, Charles, "Handsets are Part of the Network", *infra* app. A at 9 ("Jackson Paper").

⁶⁶ See generally 3GPP, <http://www.3gpp.org>.

⁶⁷ See U.S. Carrier Consumer Practices Chart, attached at Appendix B.

envelope of innovation and to better serve customers despite spectrum constraints. Examples of network intelligence enabling new features and optimizing others are abundant in the wireless space, including Internet access and assisted global positioning systems (“AGPS”).

AGPS chips utilize wireless network intelligence to provide faster, more accurate locating capabilities than traditional GPS alone. AGPS “creates a synergistic relationship between wireless networks and GPS satellites to create a precise positioning service that is available even in traditionally ‘invisible’ areas.”⁶⁸ Without intelligence both in the network and at the edge of the network, this potentially life-saving technology would not be possible.

Intelligent networks also have enabled better access to telecommunications services by Americans with hearing disabilities. Vocoder technology used in both handsets and base stations enables telecommunications-devices-for-the-deaf (“TDD”) users to benefit from the mobility offered by the wireless industry.⁶⁹

B. A Non-Discrimination Principle Will Cause Harm to Networks, and More Importantly, to Consumers

What is clear is that absent application of the current Broadband Policy Statement principles, wireless consumers benefit from wireless broadband providers’ dynamic network management practices. All of the innovation in handsets, services, and

⁶⁸ See e.g., gpsOne, QUALCOMM, available at <http://www.cdmatech.com/products/gpsone.jsp> (last accessed Apr. 13, 2007) (Describing gpsOne by Qualcomm, an Assisted GPS solution that “creates a synergistic relationship between wireless networks and Global Positioning System (“GPS”) satellites to create a precise positioning service that is available even in traditionally ‘invisible’ areas.”); see also Wireless Net Neutrality at 15.

⁶⁹ See e.g., “13K Vocoder TTY/TDD Extension”, 3rd Generation Partnership Project 2, available at http://www.3gpp2.org/public_html/specs/C.S0020-0-2.pdf (last accessed Apr. 26, 2007).

application is only available because of upgrades in and careful management of the networks. None the less, there has been a concerted effort to apply a non-discrimination principle not only to the existing wireline Broadband Policy Statement, but also to wireless. Calls to add a non-discrimination principle to the Commission's Broadband Policy Statement ignore one simple truth of wireless broadband networks – not all traffic is created equal. The simple fact is that, as described above, on shared medium broadband networks – like wireless – some packets are more time-sensitive than others. Consumers want carriers to address this time sensitivity. Whether it is prioritizing voice calls over data, or interactive data sessions over standard data, carriers manage their networks to the benefit of consumers. Further, carriers prioritize 911 calls over standard calls, and place wireless priority service calls in the queue over other calls and data sessions. CTIA believes that each of these examples is in the public interest. Calls for non-discrimination may sound sensible in a vacuum, but a better way to describe the request of advocates of a non-discrimination principle is the banning of packet priority.

As discussed *supra*, network managers use different quality of service profiles to accommodate the different characteristics of different services and to prioritize traffic for consumers' benefit. Voice service, for example, requires a higher priority because the latency of a voice call is of critical importance. While you probably won't notice if your web search results are delayed a few milliseconds before delivery, any delay in a voice call is immediately noticeable. It is this type of distinction that network providers must be able to make in a rational manner to ensure the high quality of service that consumers demand from their broadband – and voice – providers.

Application of a uniform level of priority on a broadband network is analogous to treating all traffic on our nation's highways uniformly. We don't do so, and for good reason. Tractor-trailers and passenger vehicles are not subject to the same rules of the road when travelling our nation. Lane restrictions, weight limits, and hazmat rules all exist to the benefit of all using the nation's roads. Even within one category of traffic we make priority judgments based on social benefits (such as HOV lane use). So too, the nation's information highways. Emergency priority, sensitivity to latency, and network load balancing are just a few of the tools that U.S. broadband providers use to meet the real-world needs of their consumers. And like HOV lanes that are used to meet a societal end, broadband providers prioritize within one service to meet social goals. For example, wireless E911 calls (which represent more than half of all emergency calls) and Wireless Priority Service calls (which ensure critical continuity of government wireless calls in times of emergency) are prioritized on wireless networks.

In order to make the most of the limited spectrum resources available to wireless providers, this system of priorities ensures that wireless consumers – including the more than one-fifth of American households who rely on wireless as their sole voice provider⁷⁰ – are treated to the high quality of service they have come to expect. It is important to note, that if the analogy is carried forward, wireless carriers cannot simply build more lanes. Spectrum-based services like wireless broadband are subject the laws of nature. While U.S. wireless carriers are the most efficient users of spectrum worldwide, in order

⁷⁰ See Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, July-December 2008, Centers for Disease Control and Prevention *available at* <http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless200905.htm> (last accessed June, 8, 2009).

to meet the ever-increasing demand for mobile wireless additional spectrum must be identified and allocated for CMRS.

VI. TO REACH ALL AMERICANS THE NATIONAL BROADBAND PLAN SHOULD REAFFIRM THE BENEFITS OF COMPETITION WHILE REPURPOSING AND BETTER COORDINATING PROGRAMS DESIGNED TO REACH VULNERABLE POPULATIONS.

A. As The Commission Considers “The Most Effective And Efficient Mechanisms For Ensuring Broadband Access By All People Of The United States,” It Should Reaffirm its Commitment to Competition As the Best Driver of Deployment and Innovation.

In requiring the Commission to formulate a National Broadband Plan, Congress directed the Commission to analyze the “most efficient and effective mechanisms for ensuring broadband access by all people of the United States.”⁷¹ CTIA urges the Commission to continue to recognize the vital role that competition and private investment play in delivering new services, greater innovation, and lower prices. CTIA believes that a thorough review and repurposing of the existing Universal Service Fund, combined with an understanding and recognition of the nature of competitive markets, will best facilitate both access to, and use of, broadband.

As described above, private investment and competition among wireless providers is delivering unparalleled value for U.S. consumers: falling prices, dramatic improvements in service quality, and the ongoing development of new services.⁷² The evidence also clearly suggests that output is increasing as the wireless industry continues to attract new subscribers by striving to reach the rural and underserved markets and late adopters to wireless technology, as well as meeting the demands of customers hungry for

⁷¹ Recovery Act § 6001(k)(2)(A).

⁷² See e.g., Letter from Christopher Guttman-McCabe, Vice President, Regulatory Affairs, CTIA – The Wireless Association® to Marlene Dortch, Secretary, FCC, GN Docket No. 09-51 (dated May 12, 2009).

the most bandwidth-intensive services. There can be no doubt that federal policies set during the last fifteen years have facilitated that competition and those remarkable results.

Indeed, the Commission has long recognized the benefits that competition is delivering for consumers in the United States wireless market.⁷³ The Commission's most recent data confirms that mobile broadband additions are driving the growth of high-speed lines overall.⁷⁴ CTIA applauds the Commission, and its individual Commissioners, for their appreciation of the massive effort and investment made by providers to bring broadband across the country. As Chairman Copps has aptly observed, "the private sector can, should and will be the lead locomotive for the broadband deployment train."⁷⁵ Commissioner Jonathan S. Adelstein also recognized the need to "re-double our efforts to encourage broadband development by increasing incentives for investment, because we will rely on the private sector as the primary driver of growth."⁷⁶ Similarly, Commissioner Robert M. McDowell has noted that "America continues to enjoy the most dynamic and robust Internet economy in the world. It's important to note that we achieved this success not by regulatory fiat, but by keeping regulations minimal,

⁷³ See, e.g., *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, Twelfth Report, WT Docket No. 07-71, FCC 08-28, ¶1 (rel. Feb. 4, 2008) ("*Twelfth Report*"); *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, Eleventh Report, WT Docket No. 06-17, FCC 06-142, ¶¶ 2-5 (Sept. 29, 2006) ("*Eleventh Report*").

⁷⁴ See *High-Speed Services for Internet Access: Status as of December 31, 2007* (Jan. 2009) ("*Dec. 2007 High-Speed Services Report*").

⁷⁵ Remarks of Commissioner Michael J. Copps, Quello Center Symposium (2004), available at www.fcc.gov/commissioners/copps/speeches2004.html.

⁷⁶ Remarks of Commissioner Jonathan S. Adelstein, Freedom to Connect (2007), available at <http://www.fcc.gov/commissioners/adelstein/speeches2007.html>.

thus allowing entrepreneurs to flourish.”⁷⁷ As stated by Robert Atkinson, CTIA believes that the FCC should not abdicate its oversight role, but also that it should not regulate. Instead, it should facilitate investment, deployment, and competition. CTIA urges the Commission to reaffirm its commitment to private investment and competition in its National Broadband Plan as the primary tool to deliver broadband across the nation.

Congress, in Section 332, has recognized the value of promoting competition while also directing the Commission to take additional steps to reach certain vulnerable populations.⁷⁸ For example, Section 254 of the Act codifies Congress’s historical commitment to universal service, and the Commission has implemented that provision with specific programs to reach those in high cost areas, those with low incomes, and our nation’s schools, libraries, and rural health care providers. Indeed, with the help of universal service funds, mobile wireless providers across the country are investing in expanding network capacity to deliver voice and mobile broadband services to consumers in rural areas and tribal lands. Yet, in its *Rural Broadband Strategy*, the Commission acknowledged that the Commission’s four universal service programs currently treat the support of broadband differently.⁷⁹ Thus, in these comments, CTIA encourages the Commission to harness private investment and competition to the greatest extent possible, but also outlines principles for reforming the Commission’s support programs to

⁷⁷ Statement of Commissioner Robert M. McDowell, Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, Fifth Report, GN Docket No. 07-45 .

⁷⁸ See, e.g., 47 U.S.C. § 332(a)(3) (directing the Commission to consider whether its actions will “encourage competition and provide services to the largest feasible number of users”).

⁷⁹ *Rural Broadband Strategy* at para. 127.

ensure that they evolve to meet consumers' preferences and need for mobile and increasingly high-speed services.

B. The FCC Should Use The National Broadband Plan To Better Coordinate Disparate Programs Targeted At Vulnerable Populations.

Currently a patchwork of federal and state programs support deployment of communications services to vulnerable populations, such as those with low incomes, those in high cost and rural areas, and our nation's schools and libraries. Indeed, in the recently released *Rural Broadband Strategy*, Chairman Copps observed that no less than fourteen federal agencies provide or have provided broadband-related funding.⁸⁰ Existing broadband-related programs include the Commission's own universal service programs and intercarrier compensation rules, loan and grant programs through the Department of Agriculture's Rural Utilities Service, and NTIA's Broadband Technology Opportunities Program. Through the Recovery Act, Congress provided a significant infusion of funding for the Department of Agriculture and NTIA programs but also directed the Assistant Secretary of NTIA to consider whether particular applications will result in "unjust enrichment" as a result of support from other federal programs.⁸¹

The National Broadband Plan provides an optimal vehicle for the Commission to better coordinate programs across the Federal government, as well as with its State and Tribal partners. CTIA applauds the numerous suggestions articulated in the *Rural Broadband Strategy* for improving coordination between Federal, Tribal, State, and local programs, and believes that many of these recommendations are appropriate not only in

⁸⁰ *Rural Broadband Strategy* at para. 56, App. B.

⁸¹ Recovery Act § 6001(h)(2)(D).

the context of advancing rural broadband, but with respect to promoting broadband in all reaches of our country.

CTIA is heartened to hear of the Obama administration's efforts to form an interagency working group under the auspices of the National Economic Council.⁸² CTIA commends these efforts, which should provide unprecedented opportunities for coordination and prioritization of limited public resources. Similarly, improving access to information about government programs related to broadband through greater coordination of federal web sites can help make those programs more accessible and effective.⁸³ In addition, CTIA supports Chairman Copps' call for all federal agencies to review their rules, regulations, and other requirements to identify those that might impede quick broadband implementation.⁸⁴ As discussed above, CTIA has highlighted several areas where the Commission can act to spur broadband deployment -- for example, by instituting reasonable time limits for action by local governments reviewing tower siting applications. Accordingly, CTIA applauds the recognition of the importance of timely government action.⁸⁵

C. Federal Universal Service Programs Should Be Repurposed To Focus On Consumers And Reflect Consumers' Demand For Mobile Broadband Services.

The Commission's National Broadband Plan and its efforts to reform universal service share the same fundamental goal: ensuring that all Americans have access to the communications and information technologies that they need to succeed. Congress clearly recognized the importance of delivering broadband to *all* Americans and directed

⁸² *Rural Broadband Strategy* at para. 59.

⁸³ *Rural Broadband Strategy* at paras. 74-75.

⁸⁴ *Rural Broadband Strategy* at para. 76.

⁸⁵ *See supra*, Section IV, A.

the Commission in the Recovery Act to develop a “strategy for achieving affordability of such service and maximum utilization of broadband infrastructure and service by the public.”⁸⁶ These tasks require the Commission to carefully consider the seismic shifts that have occurred in consumer preferences and marketplace conditions, driven in large part by remarkable changes in technology. As CTIA explains below, the FCC should reform its universal service programs to facilitate access by consumers to mobile broadband services.

Low Income Universal Service Support. To accomplish the goals of the Recovery Act, CTIA encourages the Commission to turn to one of its most historically effective tools for increasing adoption and stimulating demand: targeted low-income support.⁸⁷

Supporting low-income consumers’ access to mobile broadband services by repurposing universal service funds through the Lifeline and Link Up programs would direct subscription discounts to the Americans who most need it. The Commission’s Lifeline and Link Up programs have made local telephone service widely available at an affordable rate. Now, in an era defined by broadband access to the Internet, those same

⁸⁶ Recovery Act § 6001(k)(2)(B).

⁸⁷ Targeted low-income support programs have been shown to be highly effective and economically efficient means of increasing low-income subscribership. See G. Rosston and B. Wimmer, The “State” of Universal Service, 12 INFORMATION ECONOMICS AND POLICY 261, 264-65 (2000) (citing other studies reaching the same conclusion). Both petitions currently before the Commission on this subject cite to data from the Pew Internet & American Life Project showing that broadband take rates vary widely by income, with only 25 percent of Americans with incomes below \$20,000 subscribing to broadband – substantially below the average of 55 percent and well below the 85 percent of households with incomes above \$100,000 that subscribe to broadband. *Comprehensive Universal Service and Intercarrier Compensation FNPRM* at A-32 at paras. 68-69, C-31 at paras. 64-65, citing CCIA Petition at 2; TracFone Petition at 2.

Commission mechanisms should be redirected to bring broadband services to low-income Americans.⁸⁸

Using targeted support to increase U.S. mobile broadband subscription will benefit consumers and the competitive marketplace. By providing low-income Americans a subscription discount through a universal service subsidy, the consumer, not the government, will choose the broadband service that best suits his or her needs and will continue to promote the intermodal and intramodal competition that has driven innovation in broadband Internet access. The ability to choose a broadband provider is critically important to the continued growth of U.S. broadband. In order to provide low-income Americans with this level of choice, the Commission should ensure that any targeted program is open to all eligible providers regardless of technology. Such an approach is vastly superior to other proposals, which would relegate low-income consumers to inferior service or fail to incorporate appropriate means testing.⁸⁹ Instead, using targeted support will put low-income Americans on equal footing when choosing a broadband provider.

This approach best serves low-income consumers, does not tilt the competitive marketplace and targets broadband support to low-income communities which have historically had lowest levels of broadband adoption.

⁸⁸ See Letter to Chairman Michael J. Copps from CTIA—The Wireless Association, Alliance for Public Technology, AT&T, Cricket Communications, Inc., GCI, Qualcomm, Rural Cellular Association, Rural Telecommunications Group, Inc., Stelera Wireless, T-Mobile USA, Inc., TracFone Wireless, Inc., U.S. Cellular (Apr. 23, 2009).

⁸⁹ See, e.g., Letter to Marlene H. Dortch, FCC, from Christopher Guttman-McCabe, CTIA, Service Rules for Advanced Wireless Services, WT Docket Nos. 04-356 & 07-195 (June 5, 2008).

High Cost Universal Service Support. CTIA also believes that reform of the high cost universal service support mechanisms must be a central element of the Commission's National Broadband Plan, and encourages the Commission to recognize the need for dedicated universal service support for mobile broadband services, which bring the benefits of broadband not only to the home but to the person. As the Commission considers proposals to drive adoption of broadband, it should recognize that the method for measuring adoption has been overtaken by events. Just like the notion of a "third pipe to the home" no longer makes sense with the advent and evolution of mobile broadband, so too does a measurement of broadband adoption that fails to include mobile broadband. As the Commission considers changes to its Universal Service Fund, it should understand and incorporate the concept that adoption may in fact be higher than previously reported (and will continue to go even higher), due to mobile broadband offerings. As part of its National Broadband Plan, the Commission must be forward looking, and must not rely on previous ways of measuring, and ultimately facilitating, broadband.

Repurposing the legacy universal service fund is one of the most direct ways that the Commission can ensure rapid deployment of broadband, including mobile broadband, to all Americans. No matter the metric, the experience of recent years makes clear that consumers demand and need access to mobile and broadband services. Despite the fundamental changes in technology and the competitive marketplace, the universal service system remains a vestige of the last century monopoly environment, designed to support fixed wireline voice networks. The current high-cost program relies on wireless carriers to fund approximately 41% of contributions to universal service, yet the fund provides three times as much support for fully deployed legacy wireline technology as it provides for new technologies. This disparity exists, and is widening, despite the

growing evidence that innovative services, such as mobile wireless, are more highly valued by consumers and not yet fully deployed in rural and high-cost areas.

The Commission can no longer afford to allow universal service to remain a means to prop up outdated technology and failing business models. Rather, the Commission should complete its comprehensive reform of its universal service policies to encourage the deployment and availability of mobile wireless voice and broadband services in a competitively neutral manner. In light of the new realities of technology and consumer demand, the Act's universal service provisions require the Commission to commit funding for the deployment and maintenance of advanced wireless networks. Section 254 of Act demands that universal service support mechanisms provide "specific, predictable, and sufficient" support to ensure that consumers in high-cost rural areas have access to services that are "comparable" to those available in urban areas.⁹⁰ Mobile services, and more specifically, mobile broadband services, are broadly available and highly valued by all consumers. Thus, rural consumers have a right to expect the universal service system to ensure their access to wireless services that are "comparable" to those provided in urban areas.

The universal service principle of competitive neutrality also requires that the system treat wireless services, and the carriers that provide them, evenhandedly with other providers.⁹¹ To the extent that federal mechanisms support rural consumers' access

⁹⁰ 47 U.S.C. § 254(b)(5), (e).

⁹¹ 47 U.S.C. § 254(b)(7) (permitting the Joint Board to recommend, and the Commission to adopt, additional universal service principles); *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Report & Order, 12 FCC Rcd 8776, 8801 ¶ 47 (1997) ("First Universal Service Order"), *aff'd sub nom. Texas Office of Pub. Util. Counsel v. FCC*, 183 F.3d 393 (5th

to wireline service, they must support rural consumers' access to the benefits of wireless service as well. Dedicated support for mobile broadband should encompass both infrastructure deployment and ongoing maintenance and operations costs, and should measure all providers' costs in an objective and efficient manner.⁹² Indeed, federal universal service policies should make the most efficient use of scarce public resources and incent the deployment of the most efficient technologies, in order to minimize the burden on consumers that ultimately pay for universal service.

As the extensive record in the universal service docket reveals, the current outdated policies create incentives for inefficiency, inhibit broadband deployment by reducing providers' incentives to adopt innovative technologies, and are no longer sustainable in today's technological and marketplace conditions. As a result, the Commission should include as a key element of its National Broadband Plan a commitment and vision for reforming the universal service system to meet the needs of the broadband era.

D. The National Broadband Plan Should Not Allow Vestigial Regulatory Inefficiencies To Taint Our Broadband Future.

In developing a National Broadband Plan, the Commission's task is not merely to formulate policies to encourage broadband deployment, but also to identify and address legacy rules and policies that impede the efficient deployment of broadband capabilities. To this end, the National Broadband Plan should review existing rules and policies with

Cir. 1999) (adopting the competitive neutrality principle). Because it has been validly adopted under Section 254(b)(7), the competitive neutrality principle applies to the Commission with the same force as the other statutory Section 245(b) principles.

⁹² Providers such as wireless carriers that operate in a competitive marketplace should not be required to submit to monopoly-era cost and revenue accounting rules in order to receive support. Comments of CTIA, WC Docket No. 05-337, at 11-16 (filed Nov. 26, 2008).

an eye toward eliminating incentives for inefficiency and arbitrage, and lowering barriers to mobile broadband deployment.

i. The FCC must reform the broken intercarrier compensation system, which is poorly suited to promoting broadband deployment and advancing universal service.

While much attention is focused on the use of explicit funding to support the deployment of broadband networks, the Commission cannot turn a blind eye to the billions of dollars of implicit carrier-to-carrier subsidies hidden in the legacy intercarrier compensation regime. There is wide agreement that the current intercarrier compensation system severely distorts the competitive marketplace and undermines the efficient deployment of next generation voice, data, and video services delivered over broadband capable facilities. So, CTIA commends the Commission for recognizing in its *Rural Broadband Strategy* the relationship between intercarrier compensation and broadband deployment.⁹³

In the absence of meaningful reform of the notoriously inefficient intercarrier compensation rules, Congress's vision for a competitive telecommunications market with ubiquitous access to affordable, high quality telecommunications is increasingly in jeopardy. The current intercarrier compensation rules, aptly recognized by Chairman Copps as "Byzantine and broken,"⁹⁴ are premised on monopoly wireline carriers providing regulated plain old telephone services. The regime is a patchwork of policies and rules that may have been individually justifiable at some point, but have over time

⁹³ *Rural Broadband Strategy* at para. 155.

⁹⁴ See Statement of Commissioner Michael J. Copps, *Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92 (Feb. 10, 2005) (*2005 Intercarrier Compensation Further Notice*).

become inconsistent, anticompetitive, and increasingly irrational and irrelevant to today's multi-dimensional telecommunications market.

Under the Commission's arcane regulations, the amount of intercarrier compensation a carrier receives is based upon the technology it uses, the type of service it provides, and the classification of the carrier. The rules not only arbitrarily impose different rates for identical functions, but also disincent new technologies. The current regime is primarily wireline-centric and are not designed to accommodate technological innovations such as wireless and Voice over Internet Protocol ("VoIP") services that provide valuable consumer benefits. These arbitrary jurisdictional, regulatory, and technological distinctions burden consumers with legacy costs and monopoly abuses, limiting their choices and raising rates they pay for services and invite arbitrage. Furthermore, the sheer complexity of the existing regimes creates unnecessary administrative and transaction costs that are ultimately borne by end users.

The Commission must seize the opportunity presented in crafting a National Broadband Plan and relieve consumers of the burdens of the current systems and craft mechanisms that enable consumers, rather than regulators or service providers, to determine the development of communications services. To accomplish this task, the Commission must reform the current intercarrier compensation system by embracing a unified, cost-based rate for the termination of all telecommunications traffic as a transition to a bill-and-keep system.⁹⁵ CTIA has developed a Mutually Efficient Traffic Exchange ("METE") proposal as a holistic approach to the reform of both regimes.⁹⁶ CTIA's proposal represents the best means of promoting economic efficiency and

⁹⁵ See Comments of CTIA, CC Docket No. 01-92, at 21-33 (filed Nov. 26, 2008).

⁹⁶ See *Id.* at 29; Comments of CTIA CC Docket No. 01-92 (filed May 23, 2005).

facilities-based competition through a competitively neutral intercarrier compensation regime that maximizes benefits for consumers and minimizes administrative complexity.

Importantly, CTIA's METE proposal incorporates lessons learned from the wireless industry's unprecedented growth over the last decade, which has occurred largely without the benefit of massive guaranteed subsidy flows, either through intercarrier compensation or universal service. It includes sensible default interconnection rules that promote efficiency, facilitate entry of facilities-based providers, and limit onerous interconnection requirements.⁹⁷ The Commission should also take this opportunity to clarify that wireless carriers can designate separate rating and routing points for the exchange of local traffic under existing numbering and interconnection rules.⁹⁸ As described above, the success of the wireless model is compelling, and underscores the importance and urgency of reforming antiquated regimes that threaten to undermine this success.

ii. The FCC must reform its universal service contribution methodology to eliminate ever-increasing arbitrage opportunities and to stabilize its universal service programs.

In addition to addressing the distribution of support, the Commission must finally address the universal service contribution methodology by moving to a numbers- and capacity-based system. The existing revenue-based system has become increasingly unstable and incompatible with the emerging multi-dimensional telecommunications

⁹⁷ Comments of CTIA CC Docket No. 01-92, at 22 (filed May 23, 2005). *See also Comprehensive Universal Service and Intercarrier Compensation FNRM* at A-123-124 at para. 275.

⁹⁸ This issue is squarely raised in Sprint Corporation's ("Sprint") May 9, 2002 Petition for Declaratory Ruling. *See Sprint Petition for Declaratory Ruling, Obligation of Incumbent LECs to Load Numbering Resources Lawfully Acquired and to Honor Routing and Rating Points Designated by Interconnecting Carriers*, CC Docket No. 01-92 (May 9, 2002).

market. Contributors increasingly are having difficulties segregating interstate and intrastate telecommunications and non-telecommunications revenues, making compliance with the revenue-based system administratively difficult and expensive. Wireless carriers, for example, have always struggled with the segregation of revenues and traffic because they provide a service that is inherently mobile. The distinction between intrastate and interstate traffic also is an issue for VoIP providers, whose customers can make and/or receive calls wherever in the world they have access to a broadband connection. Unlimited local and long-distance plans offered by wireline carriers, too, make it harder to identify and report the revenues associated with interstate calls. An approach that requires separation of interstate and intrastate, telecommunications and non-telecommunications revenue will grow even more cumbersome and unworkable with the growing transition to services that do not rely on fixed customer locations. Add to the mix new wireless devices allowing both mobile wireless and fixed Wi-Fi connectivity and the universal service contribution picture becomes even more complicated.

The growth of broadband services also strains a universal service contribution system based on “telecommunications service” revenues, since DSL and cable modem services have been defined as “information services” and, therefore, are not subject to mandatory contribution requirements.⁹⁹ Continued reliance on a revenue-based funding mechanism in these circumstances unfairly places more of the financial responsibility for

⁹⁹ *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, Universal Service Obligations of Broadband Providers*, Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 14853 (2005) (classifying wireline broadband Internet access service, including DSL Internet access service, as an information service); *see also Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities*, Declaratory Ruling and Notice of Proposed Rulemaking, 17 FCC Rcd 4798 (2002), *aff’d*, *National Cable & Telecomm. Ass’n v. Brand X Internet Services*, 125 S. Ct. 2688 (2005).

the universal service program on a limited class of carriers and services. These developments and circumstances are reflected in the decline of the interstate telecommunications revenue base used to assess universal service contributions, which has been stagnant or generally in decline since the fourth quarter of 2000.

CTIA is encouraged that the Commission recognized in the *National Broadband Plan NOI* that universal service contribution requirements affect the economics of service deployment.¹⁰⁰ The Commission should embrace contribution reform as part of its National Broadband Plan. The extensive record before the Commission in currently open proceedings counsels strongly toward a numbers- and capacity-based approach.¹⁰¹ A numbers- and capacity-based approach would more fairly distribute the responsibility for the program and more effectively sustain the base that supports the program. Such an approach can be carefully tailored to ensure that low-income and low average revenue per unit customers do not bear an unreasonable share of the contribution obligations. Similarly, the Commission must ensure that any reform of the contribution methodology treat fairly the over 44 million wireless prepaid and over 70 million wireless family-plan customers. By moving forward with contribution reform as part of its broadband planning efforts, the Commission will ensure that the universal service burden is easier to understand and more equitable for the millions of consumers who ultimately fund these important programs, which is particularly important if the Commission decides to redirect universal service to meet the challenges of the broadband age.

¹⁰⁰ *National Broadband Plan NOI* at para. 41.

¹⁰¹ See, e.g., Comments of CTIA, CC Docket No. 01-92, at 19-20 (filed Nov. 26, 2008).

VII. CONCLUSION

The Commission and Congress should be proud of the competitive, dynamic and innovative environment they have created for wireless broadband that has fostered such accelerated deployment and adoption. By creating a stable environment and adopting the proposals found throughout these comments, the Commission can continue to drive a dynamic competitive broadband market for American consumers.

Respectfully submitted,

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